

CLAIMS

1. An unwinding device for unwinding reels of web material, comprising:
 - a rotating element (3) with supports (13, 15) for at least two reels 5 (B1; B2; B3);
 - a splicing member (31, 33, 35) to join a first web material (N1) coming from an expiring reel (B1) to the initial free end (T) of a second web material (N2) wound on a new reel (B2);
 - characterized in that at least one mechanical member (21) is associated with 10 each support (13; 15), to retain the initial free end (T) of the reel disposed on said support.
 - 2. Device as claimed in claim 1, characterized in that said at least one mechanical member (21) comprises at least one arm (23) extending radially from the respective support (13; 15) and at least one retaining element (25) carried by the free end of said at least one arm, said retaining element (25) extending substantially parallel to the axis of the reel. 15
 - 3. Device as claimed in claim 2, characterized in that said retaining element (25) is a roller.
 - 4. Device as claimed in claim 3, characterized in that said roller is supported idle on said arm. 20
 - 5. Device as claimed in claim 3 or 4, characterized in that said arm is adjustable in length.
 - 6. Device as claimed in one or more of the previous claims, characterized in that said at least one mechanical member is torsionally 25 connectable to the respective support and releasable therefrom, to rotate with the reel or to remain in an idle condition while the reel rotates.
 - 7. Device as claimed in one or more claims 2 to 5, characterized in that said retaining element (25) is movable with respect to the arm (23).
 - 8. Device as claimed in claim 7, characterized in that said retaining element cooperates with an actuator (89) which controls withdrawal of the 30 retaining element from the respective reel when the web material wound thereon is joined to the web material of the expiring reel, withdrawal releasing the retaining element from the reel.
 - 9. Device as claimed in claim 1, characterized in that said mechanical

member comprises an elastic element (25).

10. Device as claimed in claim 9, characterized in that said elastic member is connectable reversibly at one end to be released when the initial free end of the web material of the respective reel is to be joined to the web
5 material of the other reel.

11. Device as claimed in claim 9 or 10, characterized in that two hooking members of said elastic member are associated with each support of said reels, one of said hooking members (91) cooperating with an actuator (89) which controls release of the elastic member.

10 12. Device as claimed in one or more of the previous claims, characterized in that said splicing member (31, 33, 35) comprises a roller (33) and a cutting blade (35) to cut the web material (N1) coming from the expiring reel (B1).

15 13. Device as claimed in one or more of the previous claims, characterized in that it comprises a ply-bonding unit (37).

14. Method for continuously feeding a web material wound on a reel to a processing machine, comprising the phases of:

- feeding a first web material (N1) at a feed speed from a first reel (B1);
- carrying in rotation a second reel (B2) with a second web material (N2);
- when the feed speed of the first web material (N1) is essentially the same as the peripheral speed of the second reel (B2), joining the first web material (N1) to the second web material (N2) and interrupting the first web material upstream of the splicing area between the first and the second web material.

25 characterized by holding the initial free end (T) of the second web material (N2) adherent to the second reel (B2), until splicing of the first and of the second web material, by means of at least one mechanical member (21) which rotates with said second reel (B2); and carrying said at least one mechanical member to an idle position after said splicing.

30 15. Method as claimed in claim 14, characterized in that an adhesive means (BA) is applied to the external surface of the second reel (B2) in a withdrawn position, in the direction of rotation of the reel, with respect to the position in which said mechanical member (21) holds the initial free end (T) of the second web material (N2).

16. Method as claimed in claim 15, characterized in that the first and the second web material are pressed together at the level of said adhesive means to cause splicing of said web materials.

17. Method as claimed in claim 14 or 15, characterized in that said first
5 and said second web material each comprise at least one ply of tissue paper.

18. Method as claimed in claim 17, characterized in that each of said plies of tissue paper has a weight per unit of surface ranging from 15 to 60 g/m² and preferably from 15 to 30 g/m².

19. Method as claimed in one or more of claims 14 to 17,
10 characterized in that said web materials (N1, N2) are composed of more than one ply and in that the plies of the end portion of the first web material are joined together before splicing to the second web material.

20. Method as claimed in one or more of claims 14 to 18,
15 characterized in that said mechanical member (21) is torsionally connected to a support (13; 15) of the reel rotating therewith, and said mechanical member is released from said support during splicing of the first and of the second web material.

21. Method as claimed in one or more of claims 14 to 18,
20 characterized in that said mechanical member is torsionally connected to the respective reel and said mechanical member is released from said reel during splicing of the first and the second web material, withdrawing the mechanical member from the external surface of the respective reel.

22. Method as claimed in one or more of claims 14 to 20,
25 characterized in that the initial free end of the web material is held by means of an elastic mechanical member.

23. Method as claimed in claim 22, characterized in that one end of the elastic mechanical member is released during splicing of the first and the second web material.

24. Method as claimed in one or more of claims 14 to 23,
30 characterized in that a pressure member (33) is used to act on the surface of said second reel at least in an area between said mechanical retaining member and an area of reciprocal adhesion (BA) between the first and the second web material.

25. Method as claimed in claim 24, characterized in that a strip of

double-sided adhesive tape is applied to the external surface of said second reel, in said area of reciprocal adhesion.